

SOV/137-58-11-23430 D

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 227 (USSR)

AUTHOR: Zakutner, M.Ya.

TITLE: An Investigation of Grain Textures Encountered During Rolling and Recrystallization of Low-alloyed Dynamo Steel (0.9% Si) [Issledovaniye tekstury prokatki i rekristallizatsii v slabolegirovannom dinamnom zheleze (0.9%Si)]

PERIODICAL: Author's dissertation for the degree of Candidate of Physical-Mathematical Sciences, presented to the Ural'skiy un-t (Urals University), Sverdlovsk, 1958

ABSTRACT: Magnetometric methods were employed by the author in studying the formation of rolling (RT) and recrystallization (RcT) textures depending on the conditions of deformation (D) and annealing. It was established that an RT is formed in the {112} [110] plane only during limited cold D's, whereas RT's in planes (001) [110] + {112} [110] occur during severe cold D's. It is shown that the grain textures of hot and combination rolling are similar to the texture produced by cold rolling. A relationship was established between the RcT and the degree of preceding D; two types of RcT (for small and severe D) are shown. The mechanism of the formation of the

Card 1/2

SOV/137-58-11-23430 D

An Investigation of Grain Textures Encountered During Rolling and (cont.)

RT and R_cT is discussed.

ASSOCIATION: Ural'skiy un-t (Urals University), Sverdlovsk

A. B.

Card 2/2

GRIGOROV, K.V.; BLOKHIN, G.P.; KORZUN, E.A.; ZAKUTNER, M.Ya.

Study of texture produced by cold rolling and recrystallization in
iron and iron-silicon alloys. Fiz.met.i metalloved. 1 no.1:36-47
'55. (MIRA 9:3)

1. Sverdlovskiy pedagogicheskiy institut i Institut fisiki metallov
Ural'skogo filiala AN SSSR i Ryazanskiy pedagogicheskiy institut
i Sverdlovskiy sel'skokhozyaystvennyy institut.
(Iron alloys--Metallography)

ZAKUTNER, M. Ya.

126-1-22/40

AUTHORS: Grigorov, K. V., Blokhin, G. P. and Zakutner, M. Ya.
TITLE: Influence of recrystallisation on the texture of low carbon and dynamo steel. (Vliyaniye perekristallizatsii na teksturu v malougleredistoy i dinamnoy stali).
PERIODICAL: Fizika Metallov i Metallovedeniye, 1957, Vol.5, No.1, pp. 150-153 (USSR).

ABSTRACT: The changes in the texture of cold rolled low carbon (0.1% C) and dynamo steel (about 1.0% Si) during α to γ and γ to α transformation was investigated on specimens which were subjected to various reductions and annealed for various durations at 840, 860 and 1000°C . It was found that in low carbon and dynamo steels with small reduction values a change in the character of the texture takes place as well as weakening during recrystallisation. The texture is similar to the recrystallisation texture in strongly deformed material, $\{(001) [110] \sim 15^\circ\}$ and $\{(112) [110] \sim 15^\circ\}$, i.e. a recrystallisation texture of the second type which is more stable than the recrystallisation texture of the first type $\{(100) [001]\}$, $\{(110) [001]\}$. This confirms the conclusions arrived at in earlier work of the authors (Refs.7 and 8) that the

Card 1/2 recrystallisation temperature is the result of super-

126-1-22/40

Influence of recrystallisation on the texture of low carbon and dynamo steel.

position of recrystallisation textures of the first and the second types. In the case of a recrystallisation texture of the second type, the degree of perfection during recrystallisation is strongly weakened in low carbon steels as well as in dynamo steel. There are 4 figures and 8 references, 7 of which are Slavic.

SUBMITTED: August 20, 1956.

ASSOCIATION: Institute of Metal Physics, Ural Branch of the Ac.Sc. USSR. (Institut Fiziki Metallov Ural'skogo Filiala AN SSSR).

AVAILABLE: Library of Congress.

Card 2/2

GRIGOROV, K.V.; ZAKUTNER, M.Ya.

Deformation texture in the cold rolling of low-alloy electrical
steel. Fiz. met. i metalloved. 10 no.3:404-411 S '60.
(MIR 13:10)

1. Sverdlovskiy pedagogicheskiy institut i Sverdlovskiy sel'skok-
khozyaystvennyy institut.
(Rolling (Metalwork)) (Steel alloys--Metallography)

ZAKUTNER, M. Ya., Cand Phys-Math Sci -- (diss) "Investigation of the texture of lamination and recrystallization in lightly alloyed dynamo iron (0.9% Si)." Sverdlovsk, 1958. 15 pp (Min of Higher Education USSR, Ural State Univ im A. M. Gor'kiy), 120 copies (KL, 16-58, 115)

- 3 -

ZAKUTNER, M. Ya.,

"Investigation of the Texture of Rolling and Recrystallization in Low Alloy
(0. 9% Si) Dynamo Steel," Sverdlovsk, 1958 (Dissertation presented and approved
for the degree of Cand. Chem. Sci.) Ural State Univ. im A. M. Gor'kiy.

ZAKUTNY, O.

Homogeneous fluidized layers of spherical particles.
Bella, J., Hayek, R., Kosmický, and O. ZAKUTNY (Sklonerie
vysoká škola, tecb., Brno, Czechoslovakia). Chem. techn.
13, 170-85 (1959) (German summary).—The expansion of
homogenous fluidized layers of spherical particles was mea-
sured at low Archimedes' nos. 3.4 to 223. Evaluation of
the results showed that in the case of homogeneous fluidized
layers it is necessary to divide the region of flow, generally
designated as laminar, into typical laminar and pseudo-
laminar. In the typical laminar region, in agreement with
laws of hydraulics, the resistance does not depend on the d.
of the liquid. Such a case occurs only if the particles,
forming a homogeneous fluidized layer, at const. speed of
free fall in a medium of unlimited viscosity, are affected by
the resistance as expressed by Stokes' law, that is, at Archi-
medes' nos. lower than 7.2. If the Archimedes' nos. are
higher than 7.2, the resistance during flow in a homogeneous
fluidized layer is affected by the d. of the fluid, even at
Reynold's nos. considerably lower than 1.4 to 1.0, regarded
as an upper limit for the laminar region of flow. For
that reason a region of flow was designated as pseudo-
laminar. For a typical laminar and pseudolaminar char-
acter of liquid flow in a homogeneous fluidized layer, the
expansion of the layer can be expressed by the equation:
 $12.8 \cdot Re = 147 \cdot Ar + 19 \cdot v_1^{1.16}$, the validity of which is
limited by the condition that: $Re \leq Re_{\text{th}} = ((Ar + 34)/
109.3)^{1/1.16}$. v_1 is the sp. vol. of the homogeneous fluidized
layer.

Jan Micka

7
11/3/

COUNTRY : Czechoslovakia N-2
 CATEGORY :
 ABS. JOUR. : RZhChim., No. 5 1960, No. 18063
 AUTHOR : Bena, J., Ilavsky, J., Kossaczky, E., and Zakutny, O.
 DATE : Not Given
 TITLE : Homogeneous Fluidized Beds of Spherical Particles
 ORIG. PUB. : Chem Zvesti, 13, No 3, 170-185 (1959)
 ABSTRACT : The authors have measured the expansion of homogeneous fluidized beds of spherical particles at small Ar values (3.4-223). It has been established that the pressure drop in the bed is independent of the fluid density when the particles forming the bed obey Stokes' law when falling in an unbounded viscous medium; this condition is fulfilled for $Ar < 7.2$. For $Ar > 7.2$ the pressure drop in the bed depends on the density of the fluid, even for $Re = 0.4$, which has until the

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APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001963620020-2"

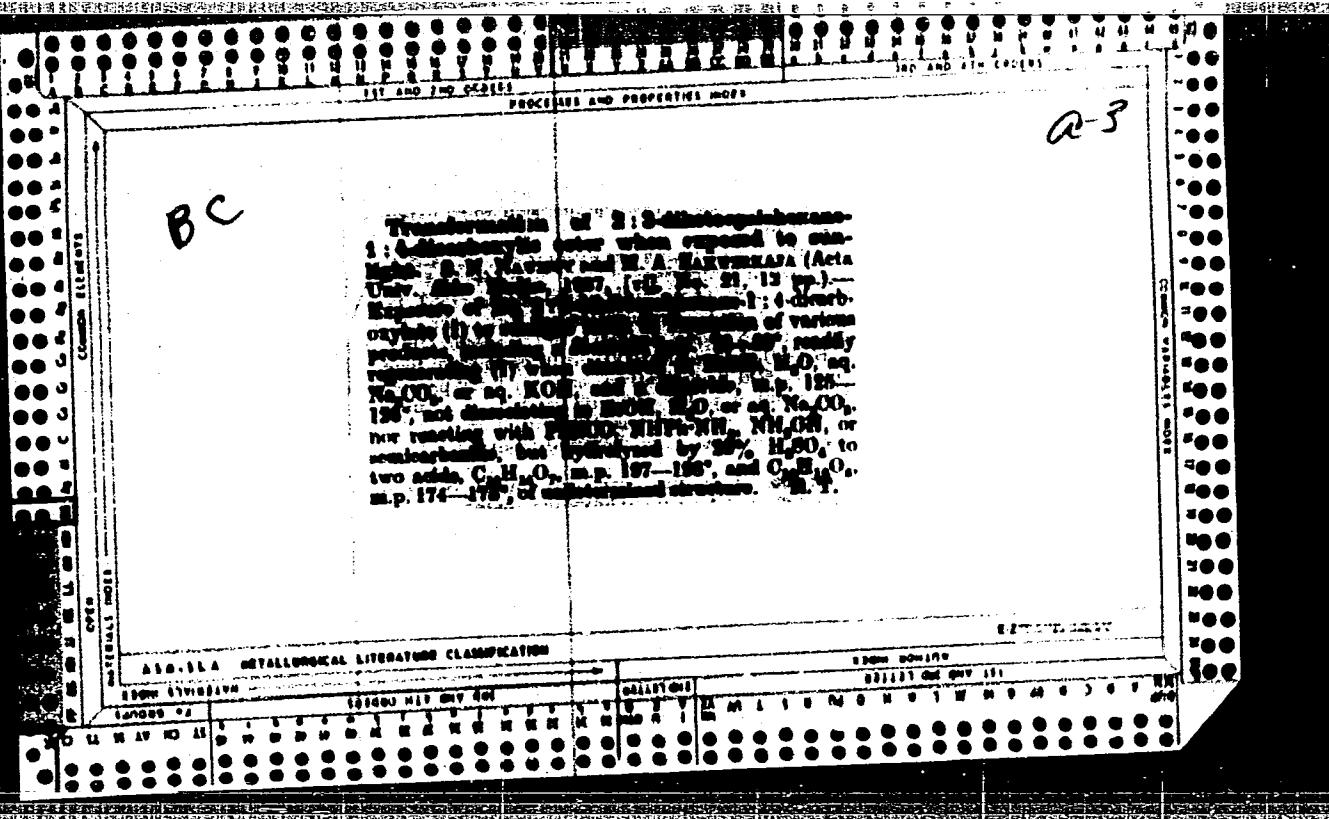
ORIG. PUB. :

ABSTRACT : present been considered the upper limit for the laminar flow region. The region corresponding to $Ar > 7.2$ and $Re < 0.4$ is termed pseudolaminar. For the laminar and pseudolaminar flow regions, the expansion of the bed is expressed by the equation

$$12.8 Re = Ar(Ar + 19)^{-0.11} \epsilon^{4.65}$$
on the condition that $Re_c = (Ar + 34/199.6)^{1/1.747}$ [misprint], where ϵ is the porosity of the bed.

CARD: 2/2

200



Bc

B-I-2

(A) Petrol from Scher-Su petroleum, from the K. horizon. (B) Hsin-Ding petroleum, and its petrol and kerosene fractions. M. A. ZAKUTZI-LAMA. (Bull. Univ. Acad. Centr., 1937, No. 22, 127-132, 133-135).—(a) The petrol contains aromatic 9-28, paraffinic 64-77, and naphthenic hydrocarbons 22-36. C_6H_{14} 0.4, C_7H_{16} 1-41, and C_8H_{16} 0.36%.
 (b) The petroleum contains petrol 3-41, benzene 12-23, and kerosene 63-24%; the petrol consists of aromatic 10-8, paraffinic 35-4, and naphthenic hydrocarbons 58-7%.

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130 AND 150 DEGREES
PROCESSES AND PROPERTIES INDEX

The condensation of dicarboxylic esters with oxalic ester in the presence of metallic sodium. I. The condensation of acetate ester with oxalic ester. M. A. Zakutskaya and N. A. Gudovskii. J. Gen. Chem. (U. S. S. R.) 8, 216-20 (in French 221) (1938).—When an equimol. mixt. of Et acetate and $(CO_2Et)_2$ in Et(A) is heated at 40° in the presence of finely divided Na, $EtO_2C(CH_2)_2CH(CO_2Et)COCO_2Et$ is formed. When this is distd. at 8 mm., it loses CO and forms *tri-Et heptane-1,1,7-tricarboxylate* (I) bp 180-6°, and up to 10% tar. When I is heated with KOH it forms acetitic acid. With Na and Et(A), I forms *tri-Et 1-ethylhexane-1,1,6-tricarboxylate* bp 180-6°, and when I and Et(A), NH₃, are heated in a sealed tube, the corresponding triamide, m. 160-2°, results. II. The condensation of suberic ester with oxalic ester. M. A. Zakutskaya and V. G. Globin. Ibid. 222-4 (in French 224).—Et suberate and $(CO_2Et)_2$ in the presence of Na give $EtO_2C(CH_2)_2CH(CO_2Et)COCO_2Et$ which splits CO when it is distd. and forms *tri-Et hexane-1,1,6-tricarboxylate*, bp 182-7°, and much tar. Sapon. of the acid with 20% KOH gives free suberic acid.

H. M. Leicester

ASA-11A METALLURGICAL LITERATURE CLASSIFICATION

FROM 1948-1950

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The Sher-see petroleum gasoline of the "K" layer. M. A. Zukutskaya. Bull. soc. chim. Russie 22, 127-31 (18 Germai., 1937) (RUS).—The gasoline fraction investigated (b. up to 150°) shows d. 0.7208, a rather high content of aromatic compds. (10.90%), an increased S content (0.30%), and a considerable amt. (20.6%) of constituents boiling up to 100°. The hydrocarbon content is 93.85% of aromatic constituents, 44.77% paraffins and 25.32% naphthalene hydrocarbons. The fraction boiling 0°-70° contains 5.8% hexane (I), and the fraction boiling 90°-100° contains 8.7% heptane (II), i. e., 0.3% I and 1.1% II when based on gasoline. Gertrude benzene

1966-67 METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963620020-2"

Study on Chaudag crude oil and its gasoline and kerosene fractions. M. A. Zabutskaya. -Bull. univ. Azerbaïdjan, 23, 133-7 (in German, 138) (1938).—Chaudag crude oil from Djarkurgan in Uzbekistan (U. S. S. R.) has d. 0.858 and contains 80% resins, 8.00% asphalt, 3.01% paraffins and 3.0% sulfur. Characteristic is a small content of gasoline (3.11%) and kerosene (12.20%) and a high percentage (81.24%) of petroleum residue. Chaudag oil belongs to the paraffin-naphthalene-naphthas with a high content of paraffin hydrocarbons (51.38%) as compared with naphthalene hydrocarbons (35.82%). The kerosene fraction consists of almost equal amounts of paraffins (35.40%) and naphthalenes (38.68%). The contents of aromatic hydrocarbons in the gasoline and kerosene fractions are 10.8 and 23.02%, resp. G. B.

Cla

The condensation of dicarboxylic esters with carboxy ester in the presence of metallic sodium. III. Condensation of M. R., calcd. 85.67, found 80.00. Much tar is also formed. Et₂ sebacate and carboxy esters. M. A. Zakhutskaya, J. Gen. Chem. (U. S. S. R.) 16, 1653-5 (1940); cf. C. A. 32, 5380. —Et sebacate, b.p. 151-3°, br. 157-9°, b.p. 204-5°, n_D²⁰ 1.4300, d₄²⁰ 0.9640, condenses with (CO₂Et) in the presence of NaOEt, or better, excess Na and a little EtOH, to give EtOOC(CH₂)₂CH(CO₂Et)COOC₂Et (I). When I is distd., it loses CO and forms Et 1,1,3-decarboxylate (II), b.p. 100-5°, n_D²⁰ 1.4410, d₄²⁰ 1.0145, M. R., calcd. 85.67, found 80.00. Much tar is also formed. When II is heated with dil. HCl, it undergoes ketonic decompn. and forms 1,1,3-decarboxylic acid (III), m. 63-8°, and much tar. The phenylhydrazone of III, m. 110-12°, and with semicarbazide it forms a deriv. which loses H₂O to give HOOC(CH₂)₂CN.NH.CO.NH.CO, m. 128-32°. IV. Condensation of decanedicarboxylic and carboxy esters. Ibid. 1530-61. —EtOOC(CH₂)₈CO₂Et, b.p. 155-6°, b.p. 151-3°, b.p. 148°, n_D²⁰ 1.4300, d₄²⁰ 0.9640, d₄²⁰ 0.9602, reacts with 2 mol. (CO₂Et), without a solvent and in the presence of excess finely divided Na and a little EtOH to give EtOOC(CH₂)₈CH(CO₂Et)COOC₂Et, which loses CO when it is heated and gives much tar, and an overall yield of 30% of Et 1,1,9-decanetricarboxylate, b.p. 178-83°, d₄²⁰ 1.0064, n_D²⁰ 1.4425, M. R., calcd. 90.20, found 90.60. With 10% KOH this is saponified to HOOC(CH₂)₈CO₂H, m. 112-17°. V. Condensation of decanedicarboxylic and carboxy esters. M. A. Zakhutskaya and F. Kh. Solomakhina, Ibid. 1562-4. Et decanedicarboxylate, b.p. 165-70°, n_D²⁰ 1.4402, d₄²⁰ 0.9508, condenses with (CO₂Et) in the presence of Na to give EtOOC(CH₂)₈CH(CO₂Et)COOC₂Et, which decomp. when it is distd. to give 30% Et 1,1,10-decanetricarboxylate, b.p. 185-90°, d₄²⁰ 1.0140, n_D²⁰ 1.4420, M. R., calcd. 94.90, found 94.12. With alkali this saponifies to HOOC(CH₂)₈CO₂H. H. M. Lipowitz

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

FROM LIBRARY		ISSUED BY ORIGIN		CALL NUMBER		JOURNAL BOUNDARY									
SEARCHED	INDEXED	SEARCHED	INDEXED	SEARCHED	INDEXED	1A	1B	1C	1D	1E	1F	1G	1H	1I	1J
SERIALIZED	FILED	SERIALIZED	FILED	SERIALIZED	FILED										

ZAKUTSKAYA, M. A.

"The Condensation of Dicarboxylic Esters with Oxalic Ester
in the Presence of Metallic Sodium -- IV. The Condensation
of Nonanenedicarboxylic Ester with Oxalic Ester,"

Zhur. Obshch. Khim., 10, No. 17, 1940.

Lab. of Organic Chemistry Central Asian State Univ.

Received 11 Feb. 1940.

Report U-1610, 3 Jan. 1952.

ZAKUTSKAYA M.A.: SOLOMASKHINA F. Kh

"The Condensation of Dicarboxylic Esters with Oxalic Ester in the Presence of Metallic Sodium--V. The Condensation of Decanedicarboxylic Ester with Oxylic Ester," Zhur. Obshch. Khim., 10, No17, 1940. Lab. of Org. Chem., Central Asian State Univ. rcd. 11 Feb. 1940

Report U-1610, 3 Jan 1952.

"APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963620020-2

ZAKUTSKAYA M.A.

— 44 —
The following table gives the results of the calculations made



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ZAKUTSKAYA, M.A.; KADYROV, Ch.K.

Nitration of 2-furyl trichloromethyl carbinol. Uzb.khim.zhur.
no.1:67-69 '59. (MIRA 12:6)

1. Sredneaziatskiy gos.universitet im. V.I.Lenina.
(Furfuryl alcohol)

ZAKUTSKAYA, M.A.; BOBRIK, V.M.

Condensation of 5-bromo-2-furaldehyde with ketones. Dok. AN
USSR no.10:21-25 '58. (MIRA 11:12)

1. Sredneaziatskiy gosudarstvennyy universitet im. V.I.Lenina.
Predstavлено членом-корреспондентом АН УзССР И.П.Тукермаником.
(Furaldehyde) (Ketones) (Condensation products (Chemistry))

AUTHORS: Zakutskaya, M. A., Yuldashev, Kh. SOV/79-29-2-15/71

TITLE: Condensation of o-Nitroanisole With Chloral Hydrate
(Kondensatsiya o-nitroanizola s khloral'gidratom)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 429-431 (USSR)

ABSTRACT: The condensations of o- and p-nitrophenol (Refs 8,9) and o-nitroanisole with chloral hydrate (Ref 10) are known among the direct syntheses of nitrodiaryl trichloroethanes. D. A. Shirley obtained only a yield of 12% 1,1,1-trichloro-2,2-di-(4-methoxy-3-nitrophenyl)-ethane (II) from o-nitroanisole (0.5 mol) with chloral hydrate (0.25 mol) in the presence of concentrated sulfuric acid (50 gr) and 20% oleum (100 gr). No secondary products forming in this condensation are mentioned in this connection. On synthesizing trichlorinated carbinols and on investigating their reactions the authors studied this condensation more closely. On varying the quantity of sulfuric acid and its rate of addition they obtained from nitroanisole (0.2 mol), chloral hydrate (0.1 mol) and sulfuric acid (1.5 mol) the compound (II) in a yield of 60% and a small amount (5%) 1,1,1-trichloro-2,2-(4-methoxy-3-nitrophenyl)(2'-methoxy-3'-nitrophenyl)-ethane (III). With a smaller amount of H_2SO_4 (0.41 mol to 0.1 mol o-nitro-

Card 1/2

Condensation of o-Nitroanisole With Chloral Hydrate SOV/79-29-2-15/71

anisole) the authors succeeded in separating 6% of the intermediate product (I) (4-methoxy-3-nitrophenyl trichloromethyl carbinol). In some condensations of o-nitroanisole (0.2 mol) with chloral hydrate (0.1 mol) and sulfuric acid (1.5 mol) only traces formed of (I), while compound (IV), melting only at 350°, formed as the chief product. Its oxidation product showed the positive reaction on an anthraquinone nucleus. With regard to the papers by Quelet (Ref 12) and collaborators the authors suppose the compound (IV) to be the product of autocondensation of (I) and to be a bis-(mesotrichloromethyl)-dimethoxy dinitro dihydro anthracene (Scheme). There are 17 references, 3 of which are Soviet.

ASSOCIATION: Sredneaziatskiy gosudarstvennyy universitet ((Soviet) Central Asian State University)

SUBMITTED: January 8, 1958

Card 2/2

VASENKO, Ye N.; GATAIA, Ye.Ye.; ZAKUTSKAYA, M.P.; KHAYDUROVA, V.F.;
SHMOULIN, O.V.

Vapor pressure and boiling point of a ternary mixture of acetic
anhydride, acetic acid, and water. Dokl. LPI 5 no. 1/2:161-
164 '63. (MIRA 17:6)

VASENKO, Ye.N.; GATALA, Ye.Ye.; ZAKUTSKAYA, M.P.; LEVASHEVA, V.L.;
KHAYDEROVA, V.F.; SHMOTGUN, O.V.

Liquid-vapor equilibrium in the ternary system acetic anhydride -
acetic acid - acetaldehyde. Dokl. LPI 5 no. 1/2:172-175 '63.
(MIRA 17:6)

ZAKUTSKIY, A.P.; KRYZHANOVSKIY, D.K.

Potentialities for the growth of labor productivity in mines of
the Vorkutugol' Combine. Ugol' 35 no.11:22-23 ■ '60. (MIRAI3:12)
(Pechora Basin--Coal mines and mining--Labor productivity)

LIBERMAN, Yu.M., kand. tekhn. nauk; ZAKUTSKIY, I.A., kand. tekhn. nauk

Relation between the resistance to bending of the bearing
surfaces of supports and the hardness of rocks. Nauch. soob.
(MIRA 17:2)
LGD 15:110-119 '62.

ZAKUTSKIY, I.A., kand.tekhn.nauk; LIBERMAN, Yu.M., kand.tekhn.nauk; RUPPENEYT,
K.V., doktor tekhn.nauk

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IL'SHTEYN, A.M.; GAYDUKOV, V.I.; ZAKUTSKIY, I.A.

Rock pressure control in longwalls of flat and inclined seams
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31 D '61. (MIRA 14:12)

(Rock pressure)
(Mine timbering)

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(Mine timbering)

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Viktor Ivanovich; ZAKUTSKIY, Igor' Aleksandrovich;
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of flat seams] Bezorgannaia posadka krovli v lavakh pologikh
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otvetstvennyy red.; SABITOV, A., tekhn.red.

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1957. 26 p.
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MARSHAKOV, I.K.; ZAKUTSKIY, V.I.

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38 no.1:237-238 Ja'64. (MIRA 17:2)

1. Voronezhskiy gosudarstvennyy universitet.

ZAKUTSKIY, V.P.

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in Odessa Gulf. Zool. zhur. 42 no.10:1579-1580 '63. (MIRA 16:12)

1. Odessa Biological Station, Institute of Hydrobiology, Academy
of Sciences of the Ukrainian S.S.R.

"APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963620020-2

ZAKUTSKIY, V.P. (Odessa)

"Swarming" of polychaetes. Priroda 52 no.3:39 '63.
(MIRA 16:4)
(Polychaeta)

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963620020-2"

ZAKUTSKIY, V.P. [Zakuts'kyi, V.P.]

Zoobenthos resources of the northwestern part of the Black
Sea. Dop. AN URSR no.10:1376-1378 '62. (MIRA 18:4)

1. Odesskaya biologicheskaya stantsiya Instituta gidrobiologii
AN UkrSSR.

ZAKUTSKIY, V.P. [Zakuts'kyi, V.P.]

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of the Sea of Azov. Zbir. prats' Zool.muz. AN URSR no.31:70-71 '62.

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part of the Tendarovskiy Bay of the Black Sea. Ibid.:72-75
(MIRA 17:2)

ZAKUTSKIY, V.P.

Supply of zoobenthos in the Black Sea. Okeanologiya 3 no.3:
504-505 '63. (MIRA 16:8)

1. Odesskaya biologicheskaya stantsiya Instituta gidrobiologii
AN UkrSSR.
(Black Sea—Benthos)

ZAKUTSKIY, V.P.

Distribution of the bottom fauna in the northwestern part of the
Black Sea. Okeanologiya 3 no.6:1085-1086 '63. (MIRA 17:4)

1. Odesskaya biologicheskaya stantsiya Instituta gidrobiologii
AN UkrSSR.

ZAKUTSKIY, V.P.

Density of the macrozoobenthos in the northwestern part of the Black
Sea. Okeanologiya 4 no.4:684-686 '64. (MFA 17:10)

I. Institut biologii yuzhnykh morey imeni A.O.Kovalevskogo, Odesskoye
otdeleniye.

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A few words about the Echinodermata of the Black Sea. Nauk. zap.
-Od.biol.sta. no.5*108-110 '64.

(MIRA 18:1)

ZAKUTSKIY, V.P.

Study of vertical migrations of some benthic and nektobenthic
organisms in the Zhabriyan Bay and Genichesk Port Aquarium.
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1. Odesskoye otdeleniye Instituta biologii yuzhnykh morey
AN UkrSSR.

ZAKUTSKIY, V.P.

Shells of Balanus improvisus as a shelter for other organisms.
Zool. zhur. 44 no.7:1092 '65. (MIRA 18:9)

l. Odesskoye otdeleniye Institute biologii yuzhnykh morey
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1. Zaveduyushchiy Zhirnovskim neftepromyslom (for Morozov).
2. Zhirnovskiy neftepromysl (for Zakutskiy).
(Paraffin)
(Oil wells—Equipment and supplies)

ZAKUYEV, A.K.

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81-89 Je '56. (MLRA 9:11)
(Perception) (Reality)

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Arabic psychology in the Near and Middle East in the Middle Ages. I. .
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"APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963620020-2

ZANZARINI, L. I., ROST, V. N., KOBENYANOV, A. N., and FRODOLINA, R., AB UDSSR

"Homolytic Isomerisation in Polyhalogenalkenes," a paper submitted
at the 16th International Congress of Pure and Applied Chemistry, Paris,
18-24 July 1957.

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CIA-RDP86-00513R001963620020-2"

~~ZAKZHEVSKIY, Ye.B., polkovnik meditsinskoy sluzhby, prof.; SAFRONOV, Ye.I.,
podpolkovnik meditsinskoy sluzhby.~~

Radiation sickness resulting from internal irradiation. Voen.-
med. zhur. no.8:29-35 '62. (MIRA 16:9)
(RADIACTION SICKNESS)

ZAL V.

Lecení zastaralých luxací poloměsíce kosti ruky. /Treatment of
old dislocations of semi-lunar bone/ Voj. měřev. listy 19:9-10
Sept-Oct 50 p. 226-9.

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Egyesulet) Budapest.

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Vol. 12, No. 8/9, Aug./Sept. 1958.

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March 1959 Unclass.

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GYORGY, Zala, dr.

Cryptorchism and its therapy. Gyermekgyogyaszat 13 no.2:33-40
F '62.

l. Heim Pal Gyermekkorhaz Sebeszeti Osztalya.
(CRYPTORCHISM ther)

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177

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3. "Soviet Union: National Characteristic Report," Tania Borodina, Director of International Relations Bureau, USSR, Moscow, 1962.	
4. "Soviet Project of a Charter of Rights of the Disadvantaged Citizen," Moscow, USSR, 1962.	
5. "Soviet Case with the Application of Pediatrics in Pediatrization" by Sergei Slobodkin, Publishing House of Medical Literature, (Scientific Research and Production Committee), pp. 1-2.	
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ZALA, Lucia, prof. (Bucuresti); TEODORESCU, Gh., prof. (Bucuresti);
CORPACIU, M., prof. (Bucuresti); POPESCU, Elena, prof. (Bucuresti)

In support of geography teaching in evening courses. Natura
Geografie 15 no.5:63-68 S-O '63.

AUTHOR: Zala, Yu. SOV/2-58-11-10/18

TITLE: On the Work of Hungarian Statisticians (O rabote statistikov Vengrii)

PERIODICAL: Vestnik statistiki, 1958, Nr 11, pp 61-64 (USSR)

ABSTRACT: This is a general description of the statistical activities in Hungary.

ASSOCIATION: TsSU Vengerskoy Narodnoy Respubliki (Central Statistical Administration of the Hungarian People's Republic)

Card 1/1

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Perfecting the auto-transformer Pat-200/220
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ZALABAK, J.

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a Ceskoslovenska vedecko-technicka spolecnost, sekce elektrotechnika) Praha,
Czechoslovakia, Vol. 20, No. 7, July 1959.

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(Učební texty vysokých škol) (Plant production; a brief course for correspondence students at the nonagricultural departments of the Higher School of Economics)

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SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 12, Dec 1957. Uncl.

ZALABA, V.

Prirucka pro planovace-economy zemedelske výroby.
Praha, Statni pedagogicke nakl., 1955. 168 p. (Ucebni
texty vysokych skol)

SOURCES: EEAL LC Vol. 5 No. 10 Oct. 1956

ZALABA K., V.

CZECHOSLOVAKIA--Plants - General aspects.

Abs Jour : Ref Zbir. - Biol., No 3, 1958, 1963, v.

Author : Zalabek, V., Chmel, V.

Inst :

Title : Plant Husbandry (short course)

Orig Pub : Praha, SNT, 1958, 213 pp., illus., 1400 Kcs.

Abstract : No abstract.

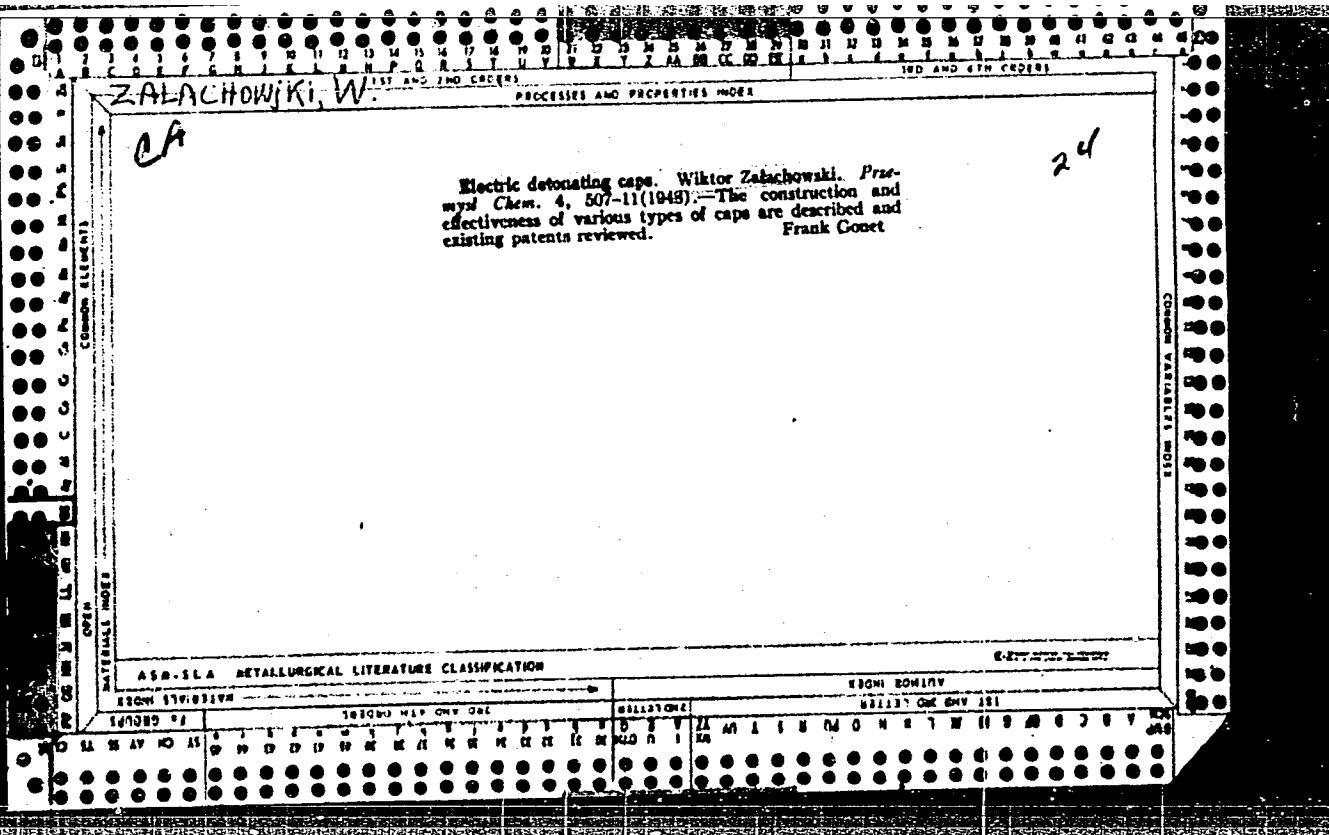
Card 1/1

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CIA-RDP86-00513R001963620020-2

ZALABA, VL.

Utilization and development of the Bulgarian stimulation methods in
Czechoslovakia. Izv Inst biol BAN 10:247-261 '60. (ZBAI 10:4)
(CZECHOSLOVAKIA--PLANTS)



KLARA, W.; POCIEJ, S.; ZALACHOWSKI, W.

Up-to-date technique of perforating oil wells. Wiad naft 7 no.10:
217-222 '61.

ZALDASTANIZHVILI, S.

Inside the Georgian Republic. Obshchestv.pit. no.4:7-9 Ap :61.
(MIRA 14:3)

1. Zamestitel' ministra torgovli Gruzinskoy SSR.
(Georgia--Restaurants, lunchrooms, etc.)

ZALDASTANISHVILI, SH. G.

Doc Agr Sci, Diss -- "Theoretical foundation of tea plant culture in the humid subtropics of the USSR". Tbilisi, Publishing House of the Georgian Agr Inst, 1961. 64 pp with drawings, 23 cm (Min of Agr GSSR. Georgian Order of Labor Red Banner Agr Inst), 180 copies, No charge (KL, No 9, 1961, p 185, No 24381). [61-53009]

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Treatment of hard asphalt-containing oils. Nagyvárad
mású Kísérleti Intézet (József Varga, Gyula Riba, András
Zalai, and Pál Steinrauner, inventors). Ger. (East) 14-
233, June 9, 1957 (Cl. 235, 1a). Lignite low-temp. tars,
coal tars, hard asphalt-contg. crude oils, or other hard as-
phalt-contg. oils are mixed with addnl. hydrocarbons in such
a ratio that the components boiling up to 350° amount to 30-
80% of the mixt. The mixt. is then treated with H at 425°
and 10-70 atm. Bubbled catalysts of weak hydrogenation
effect being used. Under these reaction conditions, the addnl.
oils must be present mainly in the gaseous phase; their amt. de-
pends on the asphalt, H, and high- or medium-boiling oil
content of the starting material and on the degree of hard-
asphalt decompn. The catalysts used are natural or arti-
ficial silicates, Al_2O_3 , and especially powd. charcoal or coke
activated with Fe_2O_3 . The reaction product may pass
through 2 or more reactors. Thus, 100 kg. crude oil of d₄
0.924, contg. 20.5% by wt. hydrocarbons boiling up to 325°,
3.6% S, and 14.4% hard asphalt was mixed with 100 kg.
oils, b. 167-235°, d₄ 0.816. The mixt was introduced into
a tube reactor with 2 cu. m. gas contg. 70% H and 4 g. char-
coal- Fe_2O_3 catalyst and heated to 440°. The pressure was
70 atm.; the space velocity 0.6 kg./l./hr., referred to the
vol. of a 2nd reactor which is connected to the 1st one. The
reaction product was continuously removed, cooled, and a
part. recovered and worked up in the usual manner. After
sepa. of 100 kg. addnl. oils, 90 kg. product was obtained;
70 kg. b. up to 350° and 20 kg. b. >350°. Nearly 90%
of the hard asphalt and 80% of the total S were converted.
K. Schneider

5

ZALAI, ANDRAS

Chemical Abst.
Vol. 48 No:3
Feb. 10, 1954
Petroleum, Lubricants, and Asphalt

The cracking of paraffin middle oils in a high-pressure atmosphere of hydrogen. Gyula Rabó and András Zalai (Research Inst. for High Pressure Expts., Budapest, Hungary). Magyar Kém. Folyóirat 58, 303-5 (1952).—Middle oil produced from mineral oil-gas oil of Láspe (d₄: 0.7000, n_D²⁰: 1.4120, melting point: 82.9°, av. mol. wt.: 230), distn. temp.: 310° in 60% was processed in a 700-ml. reactor of Cr steel of 30 mm. inner diam. under 300 atm. H₂ pressure, in the presence of 160 ml. catalyst (tungsten sulfide). The conversion to liquid products and the yield obtained were—owing to secondary reactions—below those calcd. on the basis of thermodynamic equations. Methane formation was insignificant; thus it is probable that secondary reactions take place under catalytic (and not under thermic) effects. Gasoline and middle-oil products also contained naphthenes and aromatic compds. formed probably above gaseous hydrocarbons. The yield of liquid products was reduced in the sequence 95.0, 77.5, 66.3, and 30.7% when the temp. of processing was raised from 300 to 350, 400, and 500° C., resp. The gaseous products ranged (expressed in percentages of crude initial material) 4.1, 23.5, 43.2, and 69.3%, showing ever increasing contents of methane, ethane, propane, and butane. The gasoline produced at the mentioned temps. amounted to 0.6, 23.8, 25.5, and 17.4% by wt.; its content of aromatic compds. was at temps. 350, 400, and 500° 0.6, 7.0, and 27.5% by wt., content of naphthalene 3.2, 8.6, and 34.4% by wt. István Pálály.

8-30-51
JGL

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CIA-RDP86-00513R001963620020-2

thermal cracking of asphaltic resins in presence of diluents

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CIA-RDP86-00513R001963620020-2"

ZALAI A.

HUNGARY/Solid State Physics - Structural Crystallography

E-4

Abs Jour : Ref Zhur. Fizika, No 4, 1958, No 8214

Author : Sasvari K., Zalai A.

Inst : Not Given

Title : The Crystal Structure and Thermal Decomposition of Alumina
and Alumina Hydrates as Regarded from the Point of View of
Lattice Geometry.

Orig Pub : Acta geol. Acad. sci. hung., 1957, 4, No 3-4, 415-466

Abstract : Starting with the closest-packing principles, the authors consider the crystalline structures of modifications of $\text{Al}(\text{OH})_3$ and Al_2O_3 . Changes occurring in structures of modifications of $\text{Al}(\text{OH})_3$ during dehydration are discussed.

Card : 1/1

11
Hans-Joachim (Hajo) von German, Specific surface area
and grain sizes of Hydargillite, Bayerite, and freshly pre-
cipitated Boehmite were investigated in order to select the
best starting material for prep. stable γ -Al₂O₃ of greater
surface area. Influence of H₂O elimination under heat-
treatment on grain and pore sizes is discussed briefly.
F. G. A. de Moutrey

Distr: 4E4j

PM
JL

"APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963620020-2

FREUND, Mihaly; ZALAI, Andras; GODE, Istvan; BENCZE, Laszlo

Determination of highway octane numbers. Magy kem lap 20
no.3:113-118 Mr '65.

1. Hungarian Mineral Oil and Natural Gas Experimental
Institute.

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963620020-2"

ZALAI, Andras; JAN(S), Tibor

Hydrocracking methods. Magy kem lap 19 no.6:289-296 Je '64.

1. Hungarian Petroleum and Natural Gas Testing Institute, Budapest
(for Zalai).

2. KOOLAJTERV, Budapest (for Jancso)

"APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963620020-2

KAROLYI, Jozsef; ZALAI, Andras; BIRTHLER, Richard, dr.; SPITZNER, Helmut

Achievements of the second large-scale experiment performed by
the Varga process. Magy kem lap 18 no.5:212-217 My '63.

1. Magyar-Nemet Varga Tanulmanyi Tarsasag, Budapest-Bohlen.

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963620020-2"

ZALAI, Andras, dr. (Budapest VI., Nepkoltarvasug utja 59)
BIRTHELER, Richard, dr.; (Bohlen, Streitteich 14, German Democratic Republic)

Hydrocracking experiments in the Hungarian-German Varga Society. Acta chimica Hung 31 : no.1-3:301-308. '62.

1. Ungarisch-Deutsche Varga-Studiengesellschaft, Budapest--Bohlen.

ZALAI, Andras

Refining distillate oils by hydrogenation. Magy kem lap 16 no.9:389-
396 S '61.

1. Magyar-Nemet Varga Tanulmanyi Tarsasag.

ZALAI, A.

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APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963620020-2"

G/002/61/000/012/001/003
D228/D304

AUTHORS: Birthler, Richard (Böhlen), Spitzner, Helmut
(Böhlen), Károlyi, József (Budapest), and Zalai,
András (Budapest)

TITLE: The development of the Varga Process to a state
suitable for large-scale production and its inter-
national significance for mineral-oil processing
and utilization

PERIODICAL: Chemische technik, no. 12, 1961, 704-709

TEXT: The Varga hydrocracking process of crude-oil residues
and tars produces maximum yields of refined products, namely
diesel oil and light fuel oil, and its industrial application
has already been proven in large-scale tests. This article des-
cribes the development of the Varga Process and the results of
the second large-scale test which was performed at the VEB

Card 1/6

G/002/61/000/012/001/003
D228/D304

The development of the ...

Kombinat "Otto Grotewohl" in Böhlen, SZG. The medium-pressure hydrogenation process developed by Professor Doctor József Varga of the Nagynyomású Kísérleti Intézet (High-Pressure Research Institute) for processing the sulfurous and asphaltic crude oil of the Nagylengyel deposits, underwent semiproduction tests in Pétfürdő and two large-scale tests at the VEB Kombinat "Otto Grotewohl" in Böhlen. For evaluating the tests and the development of a large-scale production process, the Hungarian-German Varga Research Society was established on June 1, 1959 with its seat in Budapest and a branch in Böhlen near Leipzig, SZG. While the first large-scale tests, performed in 1956, were made with Nagylengyel crude oil and Böhlen soft-coal tar, the second tests, performed in 1960 in cooperation with Hungarian experts, were made with Soviet Romashkin crude oil freed from gasoline by atmospheric distillation up to 200°C. Based on laboratory tests and previous experience, a former DHD plant of the "Otto Grotewohl" Works was modified for hydrocracking of Romashkin oil.

Card 2/6

G/002/61/000/012/001/003
D228/D304

The development of the ...

according to the Varga Process. A flow chart of the test plant is given in Fig. 3. The charge stock was delivered by the VEB Synthesewerk Schwarzheide, the catalyst paste by the VEB Leuna-Werke "Walter Ulbricht", the obtained stripper product was sent for further distillation to the VEB Teerverarbeitungswerk Rositz, and the residuum from the hot-separator I was used for boiler firing. The tests were made under various reaction conditions and proved the the Varga Process can be considered suitable for commercial application. Relations between the injection rate, temperature and gas-to-product ratio were established, and possibilities for increasing the yields by recycling were investigated. It was found that semisolid products in the hot-separator I can be reduced by increasing the gas-to-product ratio, that their yield depends also on the temperature in the hot-separator, and that the recycling of these products does not improve the yield. Also recycling of the contact mass is not advisable. Tests, in which the feed of reforming gas



Card 3/5

G/002/61/000/012/001/003
D228/D304



The development of the ...

was gradually reduced, showed that 2.6 wt % of reforming gas are sufficient for a charge stock which contains 85 vol % H₂. A summary of the charge stock and yields is given in

Table 5:

Charge stocks:	Crude oil	100.0
	Reforming gas	2.0
	Contact paste	4.0
	Total	106.0
Yields:	Straight-run gasoline (up to 180°C)	20.0
	Distillate gasoline	7.0
	Diesel oil (up to 360°C)	43.0
	Refined fuel oil	12.0
	Hat-separator I (virgin heavy fuel oil containing solid bodies)	12.5

Card 4/6

G/002/61/000/012/001/003
D228/D304

The development of the ...

Hot-separator II (virgin fuel oil of medium quality).....	4.0
Gases and losses.....	7.5
Total.....	106.0

The yields of a conventional refinery and a refinery with a Varga plant, both processing 1 million tons of crude oil annually, are compared and investment and operating costs calculated. Based on the tests and on the calculations, a model was established for a Varga plant with an annual capacity of 2 x 500,000 tons. In conclusion the authors stress the significance of the Varga Process and state that great attention is being paid to this process by all member states of the COMECON, since Soviet Romashkin oil will be the primary charge stock for hydrocracking in the near future. There are 5 figures, 6 tables, and 6 references: 3 Soviet-bloc and 3 non-Soviet-bloc. The reference to

Card 5/6

The development of the ...

G/002/61/000/012/001/003
D228/D304

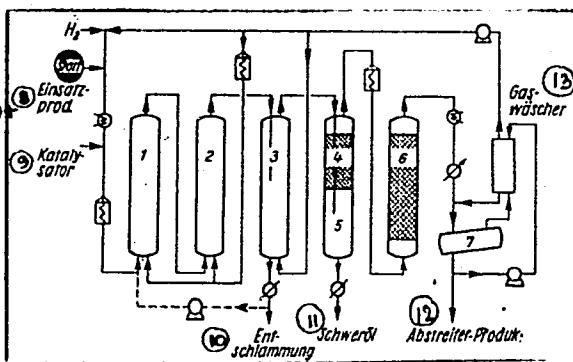
the English-language publication reads as follows: J. Varga and Coll.: Petroleum Refiner 36, no. 9, 1957.

SUBMITTED: August 29, 1961

Legend to Fig. 3: Flow chart of the large-scale test in Böhlen (SZG)

- 1 - Semisolid-phase reactor I
- 2 - Semisolid-phase reactor II
- 3 - Hot-separator I
- 4 - Vapor-phase reactor I
- 5 - Hot-separator II
- 6 - Vapor-phase reactor II
- 7 - Stripper
- 8 - Charge stock
- 9 - Catalyst
- 10 - Slurry removal
- 11 - Heavy oil
- 12 - Stripper product
- 13 - Gas scrubber

Card 6/6



ZALAT, A. : HATDEGGER, E. : KAROLYI, J.

Production of fatty alcohols by means of high-pressure catalytic hydrogenation.
p. 23

ACTA CHIMICA. Budapest, Hungary. Vol. 19, no. 1, 1959

Monthly List of East European Accessions (EEAI), LC. Vol. 8, No. 9, September 1959

Uncl.

COUNTRY : Hungary R-25
CATEGORY :
ABS. JOUR. : RZKhim., No. 21 1959, No. 76351
AUTHOR : Haidegger, F., Karolyi, J., and Zalai, A.
CIT. P. : Not given
TITLE : The Production of Fatty Alcohols by High-Pressure Hydrogenation
ORIG. PUB. : Magyar Kem Lapja, 13, No 5-6, 17-180 (1958)
ABSTRACT : The results from an investigation of the reduction of palm nut oil, sunflower oil, and coconut oil to alcohols with H₂ at high pressures and temperatures are presented. The reaction was carried out in a laboratory reactor of 2-liter capacity. It has been found that in the temperature range 300-330° the optimum temperature appears 300°. Varying the pressure in the range 205-262 atm has no effect on the alcohol yield. Satisfactory yields of alcohols were achieved

CARD: 1/2

ABS. JOUR. : RZKhim., No. 21 1959, No. 76351

INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : with catalyst concentrations (oxides of Cu, Zn, Mn) of over 2 wt %. The optimum contact time (minimum yield of paraffins) is 20 min. Experiments in a continuous laboratory reactor, using a mixture of H₂ and N₂ (75% H₂) at a pressure of 315 atm and with 1.5-4 wt % catalyst, have shown that the minimum permissible temperature increases with increasing space velocity of the reaction mass.

G. Yudkovich

CARD: 2/2

ZALAI, E.

Geography in Hungary. Top.geog. no. 14:43-59 '58.
(MIRA 12:5)
(Hungary--Geography)

HAY, Jozsef; ZALAI, Gyorgy

Some experiences with the opening of the Borsod Chemical Combine.
Magy kem lap 15 no.5/6:220-224 My-Je '60.

1. Vegyimuveket Tervezo Vallalat.

ZALAI, Gyorgyne

The Kariba reservoir in Southern Rhodesia. Foldr kozl 7
no.4: 396-397*59.

ZALAI, K.

Control examination of borated vaseline. Gyogyszeresz 8 no. 2:
28-29 Feb 1953. (CLML 23:5)

1. Doctor. 2. Budapest Pharmacological Laboratory.

KERTAI, Pal.; ZALAI, Magda.

Effect of the gastrointestinal system on leukocyte count.
Orv. hetil. 96 no.13:348 27 Mar 55.

1. A Budapesti Orvostudomanyi Egyetem Korelettani Intezetenek
kozlemens.

(LEUKOCYTE COUNT,
eff. of gastrointestinal system)
(GASTROINTESTINAL SYSTEM, physiology,
leukocyte count control)

LAWAKAYEVS, L.

U.S.S.R.

Preparation of phenyltriaethane from phenylacetic acid. A. ZAUKAUSKAS (Balt. Chem. Acad. Sci. Litv. S.S.R., Riga, Litv.). *Dokl. Akad. Nauk SSSR* 59, 1953, No. 3 (Whole No. 80) 101-55 (Rus. lit.).—Benzylidene phthalide (I) was prep'd. from 220 g. $\text{C}_6\text{H}_5\text{CO}_2\text{O}$ and 200 g. $\text{Pb}(\text{CH}_3)_2\text{Cl}_2$ by slow boiling with 5 g. anhyd. AcOK (5 g.), with continuous removal of water for 6 hrs.; cooling to 100° and dissolving the melt. into EtOH to give 330 g. I, m. 99-100². 3-Phenyl-1,3-indandione (II) was prep'd. by dissolving 55 g. I in 35% NaOMe soln. in 350 ml. MeOH , or NaOMe soln. in EtOH , adding water, acidifying with H_2SO_4 , and recryst. from glacial AcOH ; yield 47.5 g., m. 145-62. 2-Nitro-2-phenylindandione (III) was prep'd. by treating 81 g. II with 150 ml. HNO_3 (1, 1.3) in 350 ml. 93% AcOH at 39-40° with cooling and washing the resulting ppt. with EtOH ; yield 72 g., m. 117-19² (recryst. from glacial AcOH , m. 121-22²). $\text{Pb}(\text{CH}_3)_2\text{NO}_2$ (IV) was prep'd. from 23 g. III by boiling 30 min. with 200 ml. half-concd. NH_4OH (a dark-red oil npd), cooling the melt., extg. with Et_2O , acidifying with AcOH , extg. again, and combining the exts., distg., drying with Na_2CO_3 , extg. with Et_2O , etc., and finally drying, brkace; yield, 7.7 g., m. 114-15². Alternative methods

L. ZALUVIAJEVS

conditions with lower yields are described. *o*-HO₂CC₄H₇CO-CH(NO₂)₂Ph (V) was obtained by stirring 48 g. III with 260 ml. 10% aq. NaOH soln., adding 200 ml. water after 5 min., and stirring continued 5 min.; crude V ptdt. from the filtrate upon addn. of HCO₂H or H₂SO₄, and the reddish oily ppt., recrys., from CHCl₃, yielded 33.2 g. V, m. 128-9°. An intermediate removal of the Na salt improved the synthesis, yielding a product, m. 127° (from warm AcOH). IV was then prep'd. by either of the procedures: (1) di-Na salt of V (34 g.) was mixed with 40 ml. H₂O, steam distd., extd. with Et₂O, and the ext. dried with Na₂SO₄, and vacuum-distd., yielding 9.25 g. IV, b.p. 112-13°, or (2) 11.3 g. V in a mixt. of 100 ml. toluene and 10 ml. pyridine, kept 24 hrs., acidified with dil. HCl, and the toluene layer sepd., evapd., distd., dried, etc., yielded 3.2 g. IV. Alternate method: 45 g. III dissolved in 200 ml. 10% aq. NaOH, dild. 1:1 with water, acidified with H₂SO₄ (13 g. in 100 ml. H₂O), steam distd., and the dist. IV extd. with Et₂O, dried, and vacuum-distd. yielded 12.05 g. IV, b.p. 109-10°.

Andrew Dravnieks

2/2

ZALAN, Bela

Water quantity measurement as reflected in network losses.
Hidrologiai kozlony 40 no.1:48-53 F '60.

L 23956-65 ENG(s)-2/EWP(j)/EWT(m)
ACCESSION NR: AP5001783

Pc-4/Pn-4 EM

S/0097/64/000/012/0544/0545

AUTHORS: Ivanov, A. M. (Doctor of technical sciences, Professor); Zalan, L. M. (Engineer) B

TITLE: Creep of furfurol acetone sand plastoconcrete

SOURCE: Beton i zhelezobeton, no. 12, 1964, 544-546

TOPIC TAGS: concrete, construction material, resin / FA monomer, ESK hardening agent

ABSTRACT: Creep of plastoconcreto in small objects was studied under laboratory conditions (temperature 19-21°C, humidity 40-50%). The specimens were prepared at the polymer laboratory of TeNII Podzemshakhtstroy. The dimensions of test specimens were 2 x 2 x 7 cm for compressive tests, 2 x 2 x 56 cm beams for flexure tests, and also bars of 1.5 x 1 cm cross section, 5.5 cm long with widened ends for tension testing. Compression and tension deformations were measured with the use of 20-mm lever-arm tensometers with scale divisions of 0.01 mm. Specimens were prepared from the following weight percentages: sand/67.1, crushed sand 16.7, furfurol 1.7, monomer FA 11.75, hardening agent ESK 2.75. The ingredients were stirred together vigorously, placed in forms, and leveled by vibration.

Card 1/5

L 23936-65

ACCESSION NR: AP5001783

After hardening the specimens were removed from the forms and kept at 80°C for 260 hours. Strength limit and modulus of elasticity for compression, tension, and flexure were measured, using a press with a loading rate of $600 \text{ kg/cm}^2/\text{min}$. Prolonged loading tests were performed with a lever device. Loads were applied in known percentages of the strength limit and maintained for extended time periods (up to 240 days in the compression case). Figures 1, 2, and 3 on the Enclosures show, respectively, the results for compression, flexure, and tension. The authors found that compressive stress-strain relationships were nonlinear and gave the empirical formula

$$\sigma_0 = (\epsilon + c)E + \frac{(e + c)(E^*)}{A}$$

where σ_0 is the stress applied with loading, ϵ - complete deformations at given times, E - initial modulus of elasticity, c , A - constant coefficients. Orig. art. has: 1 table, 3 figures, and 1 equation.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 03

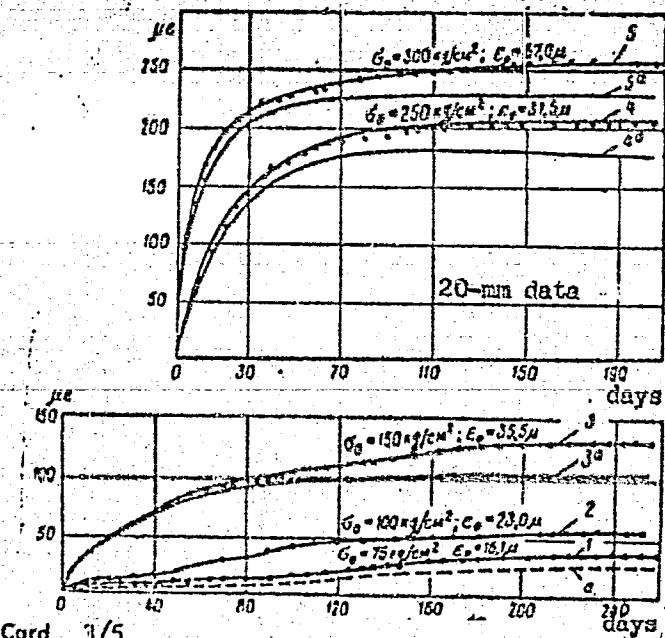
SUB CODE: MT

NO REF SOV: 003
Card 2/5

OTHER: 000

L 23936-65
ACCESSION NR: AP5001783

ENCLOSURE: 01



I-23936-65
ACCESSION NR: AP5001783

ENCLOSURE: 02

Ambient Temperature Plot

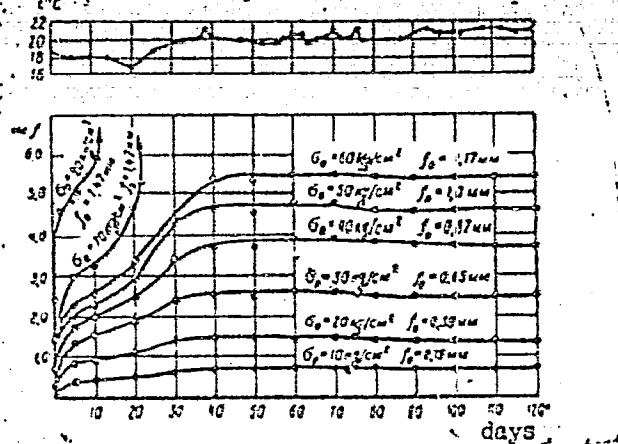


Fig. 2. Curves of plastoconcrete specimen deflection with tension.
 f_0 - initial deflections
 σ_0 - constant loading

Card 4/5

L 23936-65
ACCESSION NR.: AP5001783

ENCLOSURE: 03

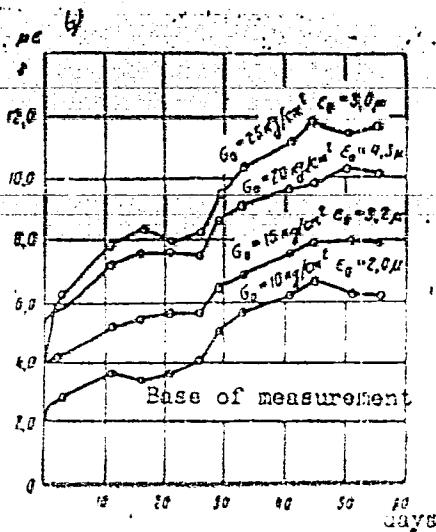
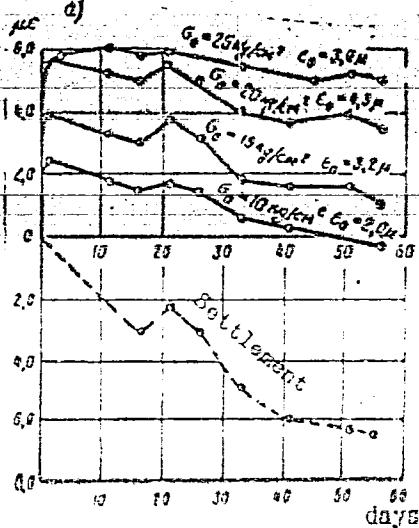


Fig. 3. Curves of plastoconcrete deformation with tension.
a - total deformations
b - deformations due to settlement.

Card 5/5

0125-00 EWT(m)/EWP(j)
ACC NR: AP5025440

RM

SOURCE CODE: UR/0097/65/000/009/0031/0032

AUTHORS: Potapov, Yu. B. (Engineer); Zalan, L. M. (Engineer)

ORG: none

TITLE: Creep of a plastoconcrete of FAM resin under compression27
25
P

SOURCE: Beton i zhelezobeton, no. 9, 1965, 31-32

TOPIC TAGS: resin, construction material, plastic compound, creep characteristic, concrete/ FAM resin, FA resin, 2GMS 20 universal machine

ABSTRACT: A study was conducted of the creep characteristics of plastoconcrete containing FAM resin which is similar to FA resin but contains a higher percentage of furfural. Specimens ($4 \times 4 \times 16$ cm) were prepared according to standard plasto-concrete specifications. The specimens were vibrated for 5 to 6 minutes and cured at 15 to 20°C and 60 to 80% humidity for one day. This was followed by a heat treatment at 80°C for one day. The strength limit was determined on a 2GMS-20 universal machine and was found to be 650 kg/cm^2 . Creep testing was performed on special lever presses, loads were applied by levers and hinge-jointed supports, and deformations were measured to the nearest 0.5 micron. The rate of loading was 600 kg/cm^2 per minute. Fig. 1 shows a plot of the creep curves for specimens loaded to 20, 30, 40, and 52% of the strength limit. Similar plots are given for the creep characteristics

Card 1/2

UDC: 620.1:666.97:691.175

L 8123-66

ACC NR: AP5025440

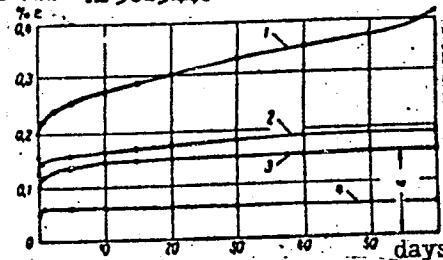


Fig. 1. Creep curves of plastoconcrete of FAM resin under axial compression. Values of stresses and initial deformations of specimens are: 1- $\sigma_0 = 335 \text{ kg/cm}^2$ and $\varepsilon_0 = 0.164\%$; 2- $\sigma_0 = 260 \text{ kg/cm}^2$ and $\varepsilon_0 = 0.128\%$; 3- $\sigma_0 = 195 \text{ kg/cm}^2$ and $\varepsilon_0 = 0.104\%$; 4- $\sigma_0 = 130 \text{ kg/cm}^2$ and $\varepsilon_0 = 0.050\%$

2

of FAM plastoconcrete with a finely ground mineral additive (proposed by engineers V. E. Leyrikh, I. T. Antonov, and R. S. Farmazyan) under conditions of prolonged loading. Plastoconcrete with FAM showed a more favorable creep resistance than FA plastoconcrete. Complete deformations following the termination of creep were nonlinear in character. FAM plastoconcrete is recommended for use as a construction material, although a wider study of its rheological properties is desirable. The study was conducted at the Voronezh Engineering Construction Institute (Voronezhskiy inzhenerno-stroitel'nyy institut) under the direction of Professor A. M. Ivanov. Orig. art. has: 3 figures.

SUB CODE: MT/ SUBM DATE: none/ ORIG REF: 002

Card 2/2 (b)